

Response to Office Action

Serial No. 10/591,389

(National Phase of PCT/JP2005/022085)

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**AMENDMENTS TO THE SPECIFICATION**

Please replace Paragraph [0004] with the following amended paragraph:

[0004] In addition, there are caused parasitic capacitance 107 between a ground [[41]] 108 of the transmission circuit 105 and a living body [[109]] 104 and parasitic capacitance 110 between the living body 104 and the earth ground 116. The living body 104 and a mobile terminal 100 are connected with each other via a transmission electrode 111 and an insulator 112. In order to increase a voltage to be applied to the living body by causing resonance with the parasitic capacitances, a reactance section 106 is inserted between the transmission circuit and a transmission/reception electrode. In an electric field communication transceiver for use in electric field communication that is floating from the earth ground, there is known reactance adjustment that adjusts reactance of a variable reactance that has been inserted between the transmission/reception electrode and the transmission circuit by means of an amplitude monitor and a control signal generator in order to efficiently induce an electric field in a living body even when the parasitic capacitances are fluctuated (See the above-mentioned patent documents).

Please replace Paragraph [0005] with the following amended paragraph:

[0005] When such a circuit illustrated in FIG. 1 is used, a voltage amplitude  $|V_b|$  to be applied to the living body at the time of resonance is expressed by the following equation:

$$|V_b| = \frac{1}{[[2\pi f R_s]] 2\pi R_s \{ C_b + C_{sb} (1 + C_b/C_g) \}} |V_s| \quad (14)$$

where  $R_s$  represents an output resistance of the transmission circuit and  $|V_s|$  represents an amplitude of an output signal from the transmission circuit. In addition, the parasitic capacitances 107, 109, 110 are designated by  $C_{sb}$ ,  $C_g$ , and  $C_b$ , respectively.

Please replace paragraph [0010] with the following amended paragraph:

[0010] In FIG. 3, a variable capacitance reactance section 601 is provided with alternating signal terminals 609, 610, an inductor 687, a buffer amplifier 686, a variable capacitance diode 671 such as a varicap diode or the like, capacitors 685, 690, resistors 688, 691. The variable capacitance diode 671 and the inductor 687 compose a resonance circuit and electrostatic capacitance of the variable capacitance diode 671 is varied by ~~a control signal inputted from the control signal input 610~~ a control signal 611 inputted from the control signal generation section 143, thereby enabling adjustment of a resonance frequency. By the way, since there is a limit to a voltage applicable (withstand voltage), the variable capacitance diode 671 has to be used in a voltage range not exceeding the withstand voltage.

Please replace paragraph [0014] with the following amended paragraph:

[0014] FIG. 5 illustrates a system in which the transceiver illustrated in FIG. 4 is used as an installed terminal side transceiver to which electric power is supplied. In a transceiver 701 as illustrated in FIG. 4, a ground 711 of a transmission circuit 703 that modulates data to be transmitted by a predetermined frequency  $f$  and outputs the modulated data is apart away from an earth ground 702, thereby causing parasitic capacitance  $C_g$  [[104]] 704 therebetween.

Please replace paragraph [0015] with the following amended paragraph:

[0015] In addition, there is caused parasitic capacitance [[706]]  $C_{sb}$  704 between the ground 711 of the transmission circuit 703 and a living body 700 and parasitic capacitance  $C_b$  705 between the living body 700 and the earth ground 702. In order to increase a voltage applied to the living body by causing resonance with these parasitic capacitances, a reactance section 710 is inserted between the transmission circuit 703 and a transmission/reception electrode 713.

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Please replace paragraph [0016] with the following amended paragraph:

[0016] FIG. 5 is a schematic view of a system enabling an electric power transmission employing the transceiver 701 of FIG. 4. In FIG. 5, [[C<sub>sg</sub> 724]] C<sub>gs</sub> 726 represents parasitic capacitance between the transmission/reception electrode 727 and an earth ground 730; C<sub>b</sub> 723 represents parasitic capacitance between the living body and the earth ground; C<sub>g</sub> 722 represents parasitic capacitance between a ground 725 of the mobile terminal side transceiver 716 and the earth ground 730; and Z<sub>L</sub> 718 ( $Z_L = R_L + X_L$ ) represents impedance of the mobile terminal side transceiver 716.